DOCUMENT RESUME

ED 092 853 CG 009 024

AUTHOR	Gottfredson, Gary D.; Holland John L.
TITLE	Vocational Choices of Men and Women: A Comparison of Predictors from the SDS.
INSTITUTION	Johns Hopkins Univ., Baltimore, Md. Center for the Study of Social Organization of Schools.
SPONS AGENCY	Johns Hopkins Univ., Baltimore, Md.
PUB DATE	May 74
NOTE	25p.
EDRS PRICE	MF-$0.75 HC-$1.85 PLUS POSTAGE
DESCRIPTORS	*Career Planning; College Students; *Occupational Choice; *Occupational Guidance; *Predictive Measurement; Research Projects
IDENTIFIERS	Holland (John L); *Self Directed Search

ABSTRACT

Several predictors of occupational choice derived from a theory of careers (Holland, 1973) were examined. Hypotheses that a person's competencies, activities, self-estimates, interests, and vocational choices can be organized by a six-category typology to understand and predict subsequent choice were tested. Samples of 894 men and 989 women took the Self-directed Search (SDS) at entry into two colleges and reported their occupational choices one or three years later. All hypotheses received support, although the predictions varied in efficiency. Other analyses indicated that current vocational choice is the best predictor of later choice, and that scores based on sex-specific norms are less efficient predictors than raw scores. The findings support both the theory and the validity of the SDS assessment for men and women. Extrapolations from these conclusions are limited by the nature of the criteria and the population tested (College students). (Author/PC)

SCOPE OF INTEREST NOTICE
The ERIC Facility has assigned this document for processing to: CG CE
In our judgement, this document is also of interest to the clearinghouses noted to the right. Indexing should reflect their special points of view.

ED 092853

Report No. 170

May, 1974

VOCATIONAL CHOICES OF MEN AND WOMEN: A COMPARISON OF PREDICTORS FROM THE SDS

Gary D. Gottfredson and John L. Holland

The Johns Hopkins University

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

STAFF

John L. Holland, Director

James M. McPartland, Assistant Director

Joan E. Brown

Judith P. Clark

David L. DeVries

Joyce L. Epstein

James J. Fennessey

Ann Forthuber

Stephanie G. Freeman

Ellen Greenberger

Edward J. Harsch

John H. Hollifield

Ruthellen Josselson

Nancy L. Karweit

Daniel D. McConochie

Edward McDill

James W. Michaels

Dean H. Hefziger

James M. Richards

John P. Snyder

Julian C. Stanley

ED 092853

VOCATIONAL CHOICES OF MEN AND WOMEN: A COMPARISON OF PREDICTORS FROM THE SDS

GARY D. GOTTFREDSON

JOHN L. HOLLAND

REPORT NO. 175

May, 1974

Published by the Careers Program (formerly Careers and Curricula), Center for Social Organization of Schools, The Johns Hopkins University. The Careers Program is supported by The Johns Hopkins University and by private funds.

The Johns Hopkins University

Baltimore, Maryland

Introductory Statement

The Center for Social Organization of Schools has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school practices and organization.

The Center works through three programs to achieve its objectives. The Schools and Maturity program is studying the effects of school, family, and peer group experiences on the development of attitudes consistent with psychosocial maturity. The objectives are to formulate, assess, and research important educational goals other than traditional academic achievement. The School Organization program is currently concerned with authority-control structures, task structures, reward systems, and peer group processes in schools. The Careers program (formerly Careers and Curricula) bases its work upon a theory of career development. It has developed a self-administered vocational guidance device and a self-directed career program to promote vocational development and to foster satisfying curricular decisions for high school, college, and adult populations.

This report, prepared by the Careers program, examines three issues in predicting vocational choices of men and women.

Acknowledgments

Dean H. Nafziger and James M. Richards, Jr. gave valuable help in the collection of the data and in the writing of this report.

Vocational Choices of Men and Women:
A Comparison of Predictors from the SDS

This report examines three issues in the prediction of vocational choice. First, the comparative usefulness of self-report measures of interests, abilities, activities, and self-estimates for predicting vocational choice is examined. Second, more evidence is provided that asking people about their occupational choices in an organized and simple manner is a useful way to get efficient predictive information. Third, the practical usefulness of sex-specific norms in assessing the vocational aspirations of men and women is considered.

The first predictive issue entails a comparative analysis of the validity of components of the Self-Directed Search (SDS), a guidance simulation (Holland, 1972). Does each component of the SDS (activities, competencies, occupations, self-ratings) predict a student's subsequent vocational choice? Are the summary codes more efficient predictors than the individual components? Although there is substantial evidence that the components of the SDS have convergent and discriminant validity with respect to one another (Holland, 1968, 1972), no single study has investigated these questions simultaneously and with the same criterion.

The second predictive issue is the relative usefulness of a person's current vocational choice for predicting subsequent choices. The belief that a person's stated choice is a useful, face-valid predictor has never been widely held or expressed. This situation perhaps arose because of the way vocational psychology developed. Historically, psychologists were more concerned with establishing the validity of interest inventories, and the investigation of the validity of expressed choice received little attention. In addition, the potential value of

classification schemes for giving psychological meaning to choices and for making better predictions has only recently become apparent. In the last five years Holland and Lutz (1968) showed that when choices are grouped according to a classification scheme, prediction of later choices from earlier choices can be highly efficient. The Elton and Rose (1970) study and reviews by Dolliver (1969) and Whitney (1969) also support the usefulness of expressed choice in research and counseling. In spite of this positive evidence, counselors and investigators continue to make only modest use of this kind of information and instead favor more esoteric predictors or even advocate the use of two interest inventories rather than just one (Munley, Fretz & Mills, 1973).

The third predictive issue stems from the belief that the use of interest and ability measures may be unfair to women because women have not had sufficient opportunity to develop interests and abilities in some areas. This assumption has led some authors to urge that special theories of careers be developed for women (Zytowski, 1969), or that norming of interest and ability scores by sex to statistically remove mean score differences may render the measures less biased (AMEG, 1973). Exploring the later suggestion, the SDS Summary Scores were normed so that the predictive validity of the high-point codes derived from standard scores and raw scores could be compared.

Method

Sample

The data were collected in an earlier study (Nafziger, Holland & Gottfredson, 1973) of student satisfaction in college. Volunteers came from two samples. One group of 2,508 students in freshman orientation

at a state university was assessed in the fall of 1970. A second group of 1,183 students undergoing freshman and transfer student orientation in a suburban public liberal arts college was assessed in the summer of 1972. The student body at the state university was more diverse than that at the liberal arts college where many students traditionally prepare to be teachers. Questionnaires were sent to students of both groups who could be located in the spring of 1973. After sending two reminders, a total of 746 questionnaires, including 624 with an expression of occupational choice, were obtained from the liberal arts group, and 1,487 questionnaires, including 1,259 with an expression of choice, were obtained from the state university. This was almost a three-year interval for the state university sample and about one year for the liberal arts sample. The reasons for nonresponse are not known, and representativeness is not claimed. In the state university sample, only the predictive validity of the SDS summary and normed summary scores could be assessed, because information about the SDS components was not available.

Measures and analyses

The source of all predictors was the SDS (Holland, 1972). This device measures a person's resemblance to six theoretical models by tapping vocational interests and their correlates. The types assessed by this inventory are named Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. These types are given their fullest description in Holland (1973). The occupational daydreams portion of this simulation asks the respondent to report the occupations he has considered and to list the most recent one first. The first occupational

daydream was coded according to its resemblance to the models by using a list of occupational titles (Holland, 1972). The activities portion asks the respondent to indicate those activities he or she likes to do. A typical item asks if the respondent likes to "meet important people." The competencies component asks what the person can do well or competently. The respondent is asked, for example, if he or she can describe the function of the white blood cells. The occupations part of the SDS asks which of a list of occupations interest or appeal to the respondent; sample items are "composer" and "high school teacher." The two self-estimates components ask the respondent to rate himself on two sets of skills or abilities, for example, scientific ability and math ability.

Each component yields a score for each of the six types. The type receiving the highest score for <u>each</u> component was the classification of that person for predictive purposes using that component. Each person was thus classified six times, once by each of the five components of the SDS usually scored, and once by the first occupational daydream. In addition, a summary score was obtained by using all components but the daydream section. For each component, the first-ranked score was weighted three, the second-ranked score was weighted two, and the third-ranked score was weighted one; these weights were then summed across all five components. The type receiving the highest score by this method was the summary code used as predictor.

All rankings of scores were performed by a computer program which listed tied scores in the order in which they appear in the assessment booklet. This order, which is presumably the way persons using the device typically break ties, was the order used for analyses when ties were not excluded. It is more conservative than the preferred methods

of breaking ties in favor of the base rate or the respondent's judgment.

Normed summary scores were calculated by subtracting the mean and dividing by the standard deviation for the appropriate sex using a large sample of college students. Means and standard deviations were obtained by pooling data from ten college samples collected earlier for various purposes. These samples are described elsewhere (Holland, Gottfredson & Nafziger, 1973; Nafziger, Holland & Gottfredson, 1973). The two samples studied in this report are included in the larger normative sample which is more diverse and representative. The standard scores were then ranked; the highest-ranked score defined the category used for prediction.

On the follow-up questionnaire, respondents expressed their occupational choices by selecting one of a coded list of 98 alternatives. Typical categories were "education administration," "data processing," and "journalism." A total of 91 persons indicated that their field was not listed and 155 persons indicated that they were undecided; these were excluded from the analyses.

Holland (1972) reports reliabilities of the scores on components of the SDS, but the reliabilities of classifications were required for this study. These reliabilities are not known, but the reliabilities of the SDS summary code and the daydreams have been approximated. Kappa (Cohen, 1960) was calculated to assess reliability of the high-point code. Kappa is a coefficient of greater-than-chance agreement given the two marginal frequencies for a set of nominal groupings. Kappa may be interpreted as the proportion of above-chance possibilities for agreement actually occurring, and it is equal to ϕ for dichotomous cases when the two marginal distributions are the same. Its maximum possible value is 1.00.

Appropriate retest data were available for a sample of high school students tested two to three months after an initial testing. The value of kappa for 122 high school men was .62 and for 83 women was .42. Data to compute the reliability of the high-point code were also available for college students who had been asked the daydream question and who had earlier the same day responded to the following item: "List all the jobs or occupations you could do and would like, if you had enough money to get the necessary training, and if you could get that job when you finished your training or education." Between these two measures, kappa was .67 for 296 men and was .71 for 321 women. All these values are only rough estimates; the high school women's sample was especially small. No information is presently available on the reliabilities of types obtained in other ways, and the reliability of the occupational choice item is also not known.

The analysis was performed by categorizing students according to each predictor (one of six types) and by their later choice (one of six occupational categories). Correct predictions occurred whenever the category of the occupation chosen had the same first letter as the predictor. Kappa was calculated for each table, and the probability of obtaining a value of kappa as large as that observed, given the assumption of no association, was calculated (Fleiss, Cohen & Everitt, 1969).

Results

Tables 1 and 2 show that about 40% of the men and 66% of the women in the liberal arts college expressed occupational choice in the category predicted by the SDS assessment one year earlier. Similarly, 42% of the men and 58% of the women in the state university chose

occupations in the category predicted by the SDS assessment almost three

---

Insert Tables 1 and 2 about here

---

years earlier. These predictions were statistically significant and moderately efficient with all p's less than .001. Kappas range from .24 to .33. By predicting that all persons will later choose occupations most often chosen by persons of their school and sex, 26.6% of the liberal arts men, 38.7% of the state university men, 72.4% of the liberal arts women, and 61.8% of the state university women would have been correctly classified. Predictions for men, but not women, exceeded the base rate prediction.

Table 3 shows that simply coding a person's most recent occupational daydream using the six-category scheme was also significantly associated with expressed choice one year later for both men and women ($p < .001$). In addition, a person's occupational daydream was more efficient than was the SDS summary code for making predictions.

Insert Table 3 about here

Kappa equaled .41 and .44 for men and women respectively, and about 12% more men and 3.5% more women fell into the diagonal cells when the daydreams rather than summary codes were used.

Table 4 shows a comparison of all predictors derived from the SDS in its usual form, including self-reported competencies, activities, occupations and self-estimates. The general trend for all predictions was the same--a disproportionate number of cases fell on the predicted diagonal. The first column of Table 4 shows the percent of choices falling into the

predicted category for each predictor when ties were included. The second column shows that these values increased for all predictors when cases with tied high-point codes were excluded (daydreams are never tied). The third column shows Cohen's kappa based on data with ties included and is therefore conservative. All predictors were associated with expressed choice beyond chance levels but varied in efficiency.

Insert Table 4 about here

The occupational daydream was most efficient, followed by the occupations component for men and by the SDS summary for women. The competencies component appeared to be least efficient for men, and the second set of self-ratings was least efficient for women.

When summary scores were normed separately by sex, the proportion of men choosing occupations in the predicted category stayed about the same--43.5% for the liberal arts group and 40.5% for the state university (kappa = .32 and .26, p's $<$ .001). This was a slight decrease for men in the later group and a slight increase for men in the former. For women, however, predictive validity decreased greatly. Only 28.7% of the women in the liberal arts college and 32.8% of the women in the state university now chose occupations in the predicted categories. Nevertheless there was still an association between the standardized high-point code and the occupation chosen (kappa = .12 and .17, p's $<$ .001).

Insert Table 5 about here

While a higher proportion of the few women choosing occupations classified as Realistic, Enterprising, and Conventional were correctly identified by

the normed scores procedure, this small gain was overwhelmed by a massive decrease in the proportion of other types correctly identified. These results for women are shown in Table 5 and may be compared to the results in Table 2 for the unnormed scores.

Discussion

This study has two important limitations. The student samples do not represent any well-defined population, and the criterion (student's expressed occupational choice after one or three years) is an intermediate one. Actual job selection would be more persuasive. Despite these shortcomings, the levels of predictive efficiency found are consistent with similar studies using more diverse or national samples (Holland & Lutz, 1968; Hughes, 1971; Nafziger, Holland, Helms & McPartland, 1972). In addition, the vocational choices of college students have a strong relation to the job followed after graduation (Dyer, 1932; Strong, 1953; Sharp & Krasnegor, 1966).

The associations found between predictions made from the separate components of the SDS--the activities, competencies, occupations, and self-estimates--and subsequent choice supports the theoretical notion that each class of personal attributes contributes to a person's decision. This interpretation does not specifically support the developmental chain hypothesized by Holland (1973), but it is consistent with that view.

In addition, the validity of all predictors supports their practical use in the self-assessment of individuals desiring career guidance. This is particularly true in the case of the first set of self-estimates for women, which was a better predictor of subsequent choice than was the occupations component, a more direct measure of interests. In line with

this finding is the related observation that the SDS summary code--a composite rating of interests, abilities, and activities--also predicted the criterion for women more efficiently than did the occupations component alone.

The finding that the most recent occupational daydream was the best predictor of later choice from among all the predictors replicates and extends an earlier finding (Holland & Lutz, 1968) and is consistent with critical reviews of the literature (Dolliver, 1969; Whitney, 1969). There seems to be little doubt that what a person says he wants to do is an important piece of information. The increased use of this information in counseling practice and research urged earlier (Holland & Lutz, 1968; Whitney, 1969) is desirable.

An examination of the base rate problem, elaborated by Meehl and Rosen (1955), is useful in understanding some of the results. Limitations of sampling and the predominance of women choosing Social occupations in almost any sample make prediction for women difficult. About 72% of the women in the liberal arts college and 62% of the women in the state university chose occupations classified as Social; that is, their choices were typified by helping or teaching occupations. This means that we would have been correct in 72% and 62% of the cases, respectively, if we had simply predicted that all women would choose those occupations. In fact we would have been right more often than by using any of the assessments used in this study.

Prediction can be perfect only when the marginal distribution of predictions is identical to the marginal distribution of outcomes, although because of error or invalidity it generally will not be perfect even then. When the marginal distributions are very unequal, predictive validity suffers. In the samples of women, the effect of

employing sex-specific norms in order to make the SDS high-point codes "fairer" resulted in more rectangular distributions of predictors while the distribution of choices remained unchanged. As a result less efficient rather than more efficient predictions occurred (see Table 5).

The effect of dissimilar marginal distributions can be demonstrated in another way. Using Cohen's (1960) formula, the maximum possible value of kappa, given the frequencies shown for the state university sample of women, is .47 and is only .34 for the liberal arts college group of women. It may be noted that even the usual unnormed scoring procedure suffered slightly from unequal marginal distributions, with too few women classified in the Social category on the predictor.

The evaluation of potential sex bias is a complex and elusive process. If one were to examine a matrix of correlations among the sets of scales in the SDS, such as the one in Holland (1972), one might conclude, as does Holland, that the pattern is evidence of the convergent and discriminant validity of these scales for measuring attributes of persons relevant to their careers. Alternately one might cite mean differences between the sexes on some of the scales and conclude that the scales measure cultural biases against men and women. When one also examines the predictive validity of the SDS components, however, a reasonable hypothesis is that the cultural bias which does exist is validly measured. A corollary of this hypothesis is that if the bias ceased to exist so would the mean differences between the sexes on these measures. This hypothesis constitutes a synthesis of the two seemingly contradictory views of the data. The attempt to use norms to adjust the scores of women on the basis of their sex succeeds in "decreasing bias" to the extent that the measures do not do what they were intended to do--measure differences of individuals related

to occupational choices.

Numbers alone may not fully convey the meaning of these results. To make the point in another way, consider the case of one of the volunteers in this study. Ms. S was 18 when she took the SDS. When she entered the liberal arts college, she planned to major in elementary education. Elementary teaching was probably not a big step up the social ladder for Ms. S because both her parents had college degrees. Elementary education is coded SAI (Social, Artistic, and Investigative in decreasing order of salience) in the Holland system. S's occupational daydreams were in line with her major at entry to college. In reverse order they were coded SAI, AIR, CEI, SAI, and SAE. When asked the next year, Ms. S was still majoring in elementary education with an A average. By use of sex-specific norms, Ms. S's Realistic score was increased because she was a woman, and her norm-based code became RAE--very different from the SAI code she earned when the usual scoring procedure was used. The occupations closest to the RAE code in the Holland system are compositor, typesetter, and bookbinder, all of which require manual and mechanical skills and virtually no social skills. In view of what we know of Ms. S. these are very inappropriate occupations for her.

The choice of scoring methods to be used would appear to depend in part on whether one desires to work for the person seeking guidance or to work for social change.

To reiterate, the four most important outcomes were: (a) the best prediction of the group of occupations a person chose was made by simply asking and then classifying the response according to an organizing scheme; (b) the hypotheses derived from Holland's theory of careers that a person's reported interests, competencies, preferred activities and self-ratings are valid predictors of later expressed choice were generally

supported, although these predictors varied in efficiency; (c) the problem of validity in predicting choice for women conflicts with the good-intentioned wish to avoid stereotyped classification because of a massive base rate problem; and (d) the attempt to use sex-specific norms for women was not successful. Extrapolations from these conclusions are limited by the nature of the criterion and the college samples.

References

APGA Commission Report on Sex Bias in Measurement. Measurement and Evaluation in Guidance, 1973, 6, 171-177.

Cohen, J. A coefficient of agreement for nominal scales. Educational and Psychological Measurement, 1960, 20, 37-46.

Dolliver, R. H. Strong Vocational Interest Blank versus expressed vocational interests: a review. Psychological Bulletin, 1969, 72, 95-107.

Dyer, J. R. Sources and permanence of vocational interests of college men--101 cases over five year period. Journal of Applied Psychology, 1932, 16, 233-240.

Elton, C. F., & Rose, H. A. Male occupational constancy and change: Its prediction according to Holland's theory. Journal of Counseling Psychology, 1970, 17, Part 2, No. 6.

Fleiss, J. L., Cohen, J., & Everitt, B. S. Large sample standard errors of kappa and weighted kappa. Psychological Bulletin, 1969, 72, 323-327.

Holland, J. L. Explorations of a theory of vocational choice: VI. A longitudinal study using a sample of typical college students. Journal of Applied Psychology, 1968, 52, 1-37.

Holland, J. L. Professional Manual for the Self-Directed Search. Palo Alto, Calif.: Consulting Psychologists Press, 1972.

Holland, J. L. Making Vocational Choices: A Theory of Careers. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.

Holland, J. L., Gottfredson, G. D., & Nafziger, D. H. A diagnostic scheme for specifying vocational assistance. Research Report No. 164. Baltimore: Center for the Social Organization of Schools, Johns Hopkins University, 1973.

Holland, J. L. & Lutz, S. W. The predictive value of a student's choice of vocation. Personnel and Guidance Journal, 1968, 46, 428-434.

Hughes, H. M., Jr. Vocational choice, level, and consistency: a test of Holland's theory on an employed sample. (Doctoral dissertation, State University of New York at Albany) Ann Arbor, Michigan: University Microfilms, 1971, No. 71-26, 772.

Meehl, P. E., & Rosen A. Antecedent probability and the efficiency of psychometric signs, patterns, or cutting scores. Psychological Bulletin, 1955, 52, 194-216.

Munley, P. H., Fretz, B. R. & Mills, D. H. Female college students' scores on the men's and women's Strong Vocational Interest Blanks. Journal of Counseling Psychology, 1973, 20, 285-289.

Nafziger, D. H., Holland, J. L. & Gottfredson, G. D. Student-college congruency as a predictor of satisfaction. Research Report No. 163. Baltimore: Center for the Social Organization of Schools, Johns Hopkins University, 1973.

Nafziger, D. H., Holland, J. L., Helms, S.T. & McPartland, J. M. Applying an occupational classification to a national representative sample of work histories of young men and women. Research Report No. 132. Baltimore: Center for the Social Organization of Schools, Johns Hopkins University, 1972.

Sharp, L. M. & Krasnegor, R. B. Five Years After the College Degree: Part II--Employment. Washington: Bureau of Social Science Research, 1966.

Strong, E. K., Jr. Validity of occupational choice, Educational and Psychological Measurement, 1953, 13, 110-121.

Whitney, D. R. Predicting from expressed vocational choice: a review. Personnel & Guidance Journal, 1969, 48, 279-286.

Zytowski, D. G. Toward a theory of career development for women. Personnel and Guidance Journal, 1969, 47, 660-664.

Table 1

Validity of SDS Summary Code for Predicting
Men's Expressed Occupational Choices One and Three Years Later

First Letter of SDS Summary Code	Men in a State Liberal Arts College (N=192) Occupational Choice One Year Later						
	R	I	A	S	E	C	Total
R	*4*	4	4	2	8	6	28
I	1	*21*	4	12	3	6	47
A		4	*16*	7		1	28
S	1	10	9	*27*	15	3	65
E		2	5	3	*6*	1	17
C		3	2			*2*	7
Total	6	44	40	51	32	19	

39.6% correct prediction, kappa = .24, $p < .001$; 26.6% correct prediction when all are classified S.

First Letter of SDS Summary Code	Men in a State University (N=702) Occupational Choice Three Years Later						
	R	I	A	S	E	C	Total
R	*35*	43	10	13	24	13	138
I	25	*181*	20	19	27	21	293
A	2	6	*17*	12	11	1	49
S	8	36	10	*22*	47	16	139
E	2	6	9	7	*34*	12	70
C	1		1		5	*6*	13
Total	73	272	67	73	148	69	

42.0% correct prediction, kappa = .24, $p < .001$; 38.7% correct prediction when all are classified I.

Note.--In this and succeeding tables, the italicized entries are frequencies in the predicted cells.

Table 2

Validity of SDS Summary Code for Predicting
Women's Expressed Occupational Choices One and Three Years Later

First Letter of SDS Summary Code	Women in a State Liberal Arts College (N=432) Occupational Choice One Year Later						
	R	I	A	S	E	C	Total
R	_	1		3		1	5
I		22	1	34	2	2	61
A		10	30	33	1	2	76
S	1	21	12	234	6	3	277
E			1	3	_		4
C				6	2	1	9
Total	1	54	44	313	11	9	

66.4% correct prediction, kappa = .33, $p < .001$; 72.4% correct prediction when all are classified S.

First Letter of SDS Summary Code	Women in a State University (N=557) Occupational Choices Three Years Later						
	R	I	A	S	E	C	Total
R	_	1		1			2
I	3	41	6	34	6	2	92
A		11	27	48	10	1	97
S		29	34	247	18	5	333
E		3	4	6	2	1	16
C			2	8	1	6	17
Total	3	85	73	344	37	15	

58.0% correct prediction, kappa = .28, $p < .001$; 61.8% correct prediction when all are classified S.

Table 3

Validity of Occupational Daydream for Predicting
Expressed Occupational Choices One Year Later

First Letter of	Men in a State Liberal Arts College (N=163) Occupational Choice One Year Later						
of Daydream Code	R	I	A	S	E	C	Total
R	5	2	4	4	3	4	22
I	1	25	4	5	2	3	40
A		2	18	11	3		34
S		5	2	23	5		35
E		3	4	1	9	6	23
C		1		1	2	5	9
Total	6	38	32	45	24	18	

52.1% correct prediction, kappa = .41, $p < .001$

First Letter	Women in a State Liberal Arts College (N=396) Occupational Choices One Year Later						
of Daydream Code	R	I	A	S	E	C	Total
R	–			2		1	3
I		34	4	39	1	4	82
A	1	5	29	28	2		65
S		7	3	212	4	1	227
E			5	4	1	2	12
C		2		2	2	1	7
Total	1	48	41	287	10	9	

69.9% correct prediction, kappa = .44 $p < .001$

Table 4

Summary of Validities of SDS Components for Predicting Expressed Occupational Choice One Year Later

	Men (N=192)			Women (N=432)		
Predictor	% hits	% hits no tie	kappa	% hits	% hits no tie	kappa
Most frequent category	26.6	--	--	72.4	--	--
First Daydream	52.1	--	.41**	69.9	--	.44**
Activities Code	32.3	38.6	.17**	52.8	57.5	.17**
Competencies Code	25.5	27.3	.06*	55.3	61.5	.13**
Occupations Code	43.2	44.4	.30**	51.6	55.6	.21**
First Set Self Ratings	38.5	43.6	.25**	59.2	62.6	.36**
Second Set Self Ratings	28.6	32.4	.12**	49.5	55.0	.14**
Summary Code	39.6	44.0	.24**	66.4	69.4	.33**

Note.--N=163 for men and 396 for women for the occupational daydream item because not all respondents completed that item. N's fall as low as 145 for men and 353 for women when ties are excluded. The value of kappa is based on tables in which tied predictors were included.

* $p<.05$ **$p<.001$

Table 5

Validity of Highest Normed Summary Score for Predicting Women's Occupational Choice One and Three Years Later

Highest Normed Score	Women in a State Liberal Arts College (N=432) Occupational Choice One Year Later						
	R	I	A	S	E	C	Total
R	1	7	6	34	1	2	51
I		21	1	51	1	2	76
A		11	24	54	1	2	92
S		5	5	74			84
E		2	7	46	1		56
C		8	1	54	7	3	73
Total	1	54	44	313	11	9	

28.7% hits, kappa = .12, $p < .001$

Highest Normed Score	Women in a State University (N=557) Occupational Choice Three Years Later						
	R	I	A	S	E	C	Total
R	2	9	9	27	3		50
I	1	51	4	49	5	2	112
A		8	30	62	10	1	111
S		6	8	81	7	1	103
E		10	18	78	9	1	116
C		1	4	47	3	10	65
Total	3	85	73	344	37	15	

32.8% hits, kappa = .17, $p < .001$